

EDGE X FOUNDRY™

## TSC Meeting

Nov 9, 2022



Levski  
Release  
Day?

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# Meeting Logistics

Time: Wednesdays 8am PDT – 9am PDT

Join from PC, Mac, Linux, iOS or Android: <https://zoom.us/j/983155298>

Or iPhone one-tap (US Toll): +14086380968,983155298# or +16465588656,983155298#

Or Telephone:

Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+1 855 880 1246 (US Toll Free)

+1 877 369 0926 (US Toll Free)

Meeting ID: 983 155 298

International numbers available: <https://zoom.us/join?j=983155298>

\*\* TSC calls are recorded and added to Wiki post-call



# TSC – Members Present Today

<u>Company</u>	<u>Name</u>	<u>Email</u>	<u>Position</u>
IOTech	Iain Anderson	<a href="mailto:iain@iotechsys.com">iain@iotechsys.com</a>	Device Services WG Chair
Intel	Ernesto Ojeda	<a href="mailto:ernesto.ojeda@intel.com">ernesto.ojeda@intel.com</a>	Dev Ops WG Chair
Intel	Bryon Nevis	<a href="mailto:bryon.nevis@intel.com">bryon.nevis@intel.com</a>	Security WG Chair
Intel	Lenny Goodell	<a href="mailto:leonard.goodell@intel.com">leonard.goodell@intel.com</a>	Applications & Analytics WG Chair
IOTech	Cloud Tsai	<a href="mailto:cloud@iotechsys.com">cloud@iotechsys.com</a>	Core & Test/QA WG Chair

## At Large Members:

Gavin Lu (VMWare), Farshid Tavakolizadeh (Canonical), Melvin Sun (Intel), James Butcher (IOTech), Tom Brennan (Eaton)

Current quorum = 7 members

*Note: Quorum for TSC meetings requires at least fifty percent of all voting members of the TSC to be present. The TSC may continue to meet if quorum is not met, but will be prevented from making any decisions at the meeting. Except as provided in Section 7.c. and 8.a, decisions by vote at a meeting require a majority vote of those in attendance, provided quorum is met. Decisions made by electronic vote without a meeting require a majority vote of all voting members of the TSC.*

# Today's Agenda

- Levski Release Today?
  - WG updates including vote to release
- ADR and UCR updates
- Doc updates
- Miscellaneous



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# Work Group Updates

Chairs

# Working Group Chair Updates

- Around the horn
  - Product Manager - Lenny Goodell
  - Applications - Lenny Goodell
  - Core - Cloud Tsai
  - Device Services - Iain Anderson
  - DevOps - Ernesto Ojeda
  - Release Czar - Bill Mahoney
  - Security - Bryon Nevis
  - PRC Updates - Melvin Sun and Gavin Lu
  - Outreach and Marketing
    - Certification - Rodney Hess
    - Vertical Solutions (and LF Edge TAC) - Henry Lau

# Product Manager (11/09/22) - Levski

[Cross Cutting Issues](#)

## Icebox (3)

- Lite Builds (no security features) via Build Tags
- Go 1.19 (<https://tip.golang.org/doc/go1.19>)
- Microservice Auth

## Backlog (0)

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## In Progress (0)

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## Done (12)

- **Levski Change Logs**
  - go-mods - **DONE**
  - App SDK - **DONE**
  - APP Services - **DONE**
  - Go Device SDK - **DONE**
  - Device Services - **DONE**
  - edgex-go - **DONE**
  - edgex-ui - **DONE**
  - edgex-cli - **DONE**
- Commands via MessageBus (aka N/S MessageBus)
- Additional Metrics for Levski (more in Minnesota)
- NATS Make targets and compose
- Secure MQTT MessageBus
- Request new Consul token on Auth failures
- System Events (aka CPE) (UC/ADR/Impl)
- Go 1.18
- NATs MessageBus
- Explore goweight to see impact of individual libs (nothing actionable)
- eclipse/paho.mqtt.golang 1.4.1 (License update to v2.0)
- [Securing Consul with Access Token](#)



# Applications WG Update (11/09/22) - Levski

## Newly Completed (6)

- fix: Username may be required when MQTT cert authentication [#1215](#)
- Updated SDK with released Go Mods
- Released the SDK
- Updated ASC and App LLRP to released SDK
  - Ready to be released
- Updated docker compose files to use eKuiper 1.7.1
  - Tested with Redis, MQTT and NATS MessageBus options
- App service examples updated for Levski

## New (3)

- 3 Dependa-Bot PRs on hold

## WIP (0)

## Done for Levski (54)

## Backlog (0)

- <https://github.com/orgs/edgexfoundry/projects/50/views/2>

## ICE BOX (12)

- Leftovers not planned or completed for Levski and old low issues

## 3.0 ICE BOX (10)

## Next

- Minnesota planning

## eKuiper

- No update from eKuiper team this week

**New Project Board:** <https://github.com/orgs/edgexfoundry/projects/50/views/2>

# Application Services - Levski

## Functions (built into SDK)

- Add Tags
- Batch
- Compression (GZIP & ZLIB )
- Conversion (XML & JSON)
- PushToCore **\*\* DEPRECATED\*\***
- **EventWrapper - NEW**
- Encryption (AES256)
- Encryption (AES) **\*\* DEPRECATED\*\***
- Export
  - MQTT
  - HTTP POST & PUT
- Filtering
  - By Profile Name
  - By Device Name
  - By Source Name
  - By Resource Name
- JSONLogic
- Set Response Data
- **ToLineProtocol (transforms Metric DTO) - NEW**

## Features

- Store and Forward
- Batch and Send
- Web Server
- Configurable App Service
- Vault Integration for Secrets
- MQTT Event triggers
- Filter by Topics
- Custom Triggers
- Publish Topics and URL Placeholders
- Structure Custom Configuration
- Background Publishing
- Received Topic
- Context Storage
- Service Metrics - **NEW**
- Clients
  - Logging, Event
  - Command
  - Device, DeviceService
  - DeviceProfile
  - Notification
  - Subscription
  - Registry

## Reference/Example App Services

(built on top of SDK)

### Released Services

- App Service Configurable
- App RFID LLRP Inventory

### Examples

- Simple Filter
- Simple Filter and MQTT Export
- Simple Filter and HTTP Export
- Simple CBOR
- Cloud Export

- Cloud Event Transformation
- Secret Retrieval
- JsonLogic
- Send Command
- Convert & Publish
- Custom Target Type
- IBM Watson IoT (ASC Profile)
- Custom Trigger
- Influx DB & Flege Exports
- Camera Management - **NEW**

# Core WG Snapshot (8 Nov 2022)

- TAF:
  - Functional tests:
    - Non-Security **606** tests - all passed / Security **606** tests - all passed
  - Integration tests:
    - Non-Security **122** tests - all passed / Security **125** tests - all passed
  - Performance tests:
    - Non-Security **10** tests - all passed / Security **10** tests - all passed
- Executed North-south messaging tests with external MQTT broker over TLS manually

## Core Project Board Status

- 0 New Issues (-1)
- 0 Release Backlog (-4)
- 0 In Progress/QA (+0)
- 111 Levski Done (+9)
- 37 Icebox (+3)

## QA/Test Project Board Status

- 0 New Issues (+0)
- 0 Release Backlog (+0)
- 2 In Progress/QA (-1)
- 21 Done (+1)
- 1 Icebox (+0)

Next meeting: Tuesday November 22th @ 4 PM Pacific Time

# Device Services WG Update (9 November 2022)

Release status:

- usb-camera and grove will slip
- all other services ready

*Next meeting: November 21st - includes presentation on device-rest*

# Device Services - current/coming (as of v2.3)

## Open Source connectors (Current):

- Modbus (TCP/RTU) in Go
- Virtual Device in Go
- SNMP in Go
- MQTT in Go
- BACnet (IP & MSTP) in C
- ONVIF and USB Cameras in Go
- REST in Go
- Grove in C (v1 only)
- CoAP in C
- LLRP / RFID in Go
- GPIO in Go

## Open Source connectors (Future):

- UART in Go
- OPC-UA in Go

## Commercial connectors (Current):

- BLE in C
- Zigbee in C
- GPS in C
- CAN in C
- CANOpen in C
- MEMS in C
- EtherCat in C
- EtherNet/IP in C
- PROFINET in C
- OPC-UA in C
- OPC-UA Pub/Sub in C
- Siemens S7 in C
- File reader in C
- WebSockets in Go

There are additional commercial MQTT (Go), Modbus (C), REST (Go), ONVIF (C) and BACnet (in C) that have added features over the community editions

# DevOps WG Update (11-08-2022)

## Pipeline Related

- [#412](#) [Complete] Update edgeXReleaseDocs pipeline after latest changes
- [#413](#) [Complete] Update Swagger API version on release
- [#284](#) [Complete] Update edgexfoundry DockerHub Overviews for Kamakura

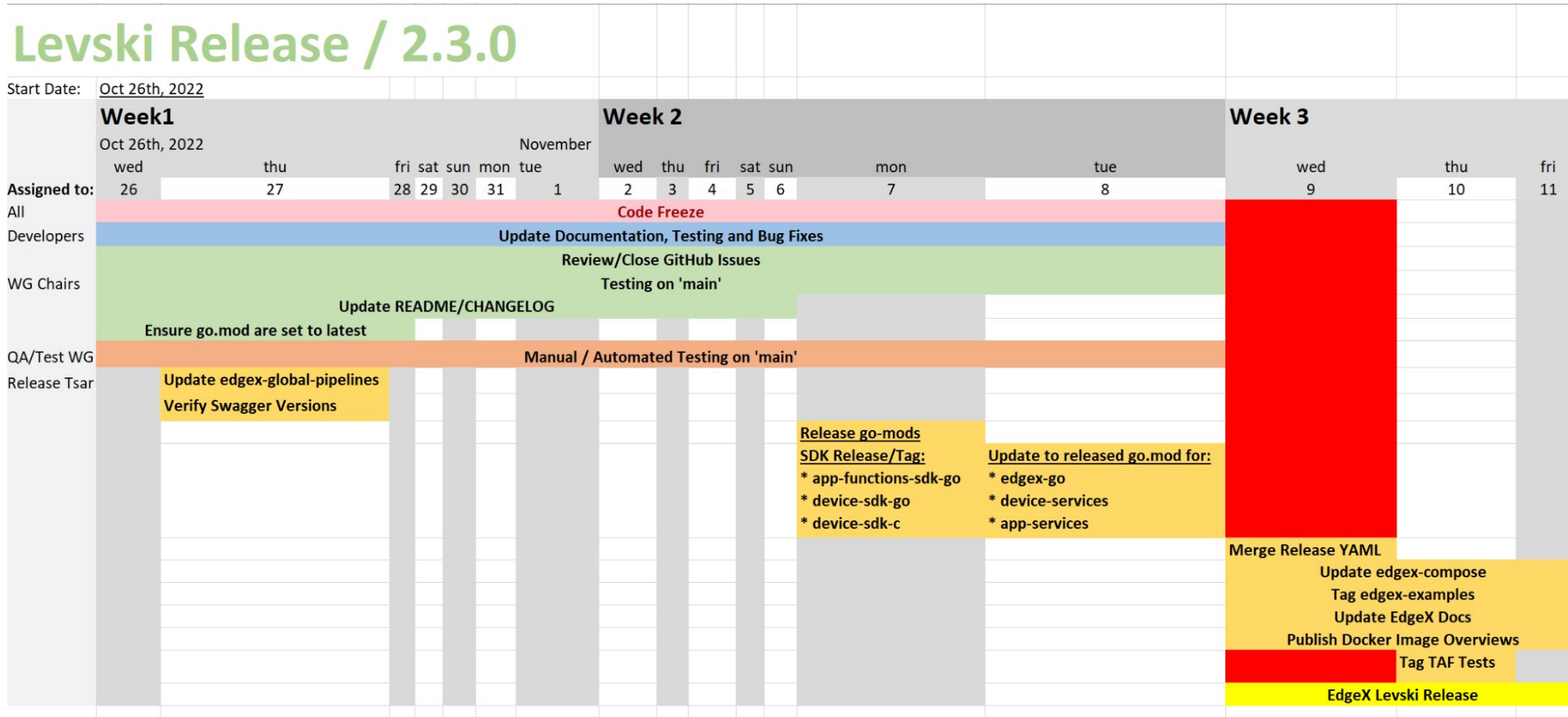
## Other

- N/A

**Next DevOps WG Meeting: Tuesday, November 22, 2022 @ 9AM PST**

# Release Czar (2022-11-09) - Levski Release Day

- TAF Status
- TSC Approval



EdgeX Release Process: <https://wiki.edgexfoundry.org/display/FA/Release+Checklist>

# Security WG Update

## Next Meeting: 11/9 (today)

- Review security scope going into Minnesota planning conference
- Microservice authentication UCR & ADR up for review
- Discussion with OpenZiti project to see where it can fit in and if OpenZiti is willing to contribute an integration

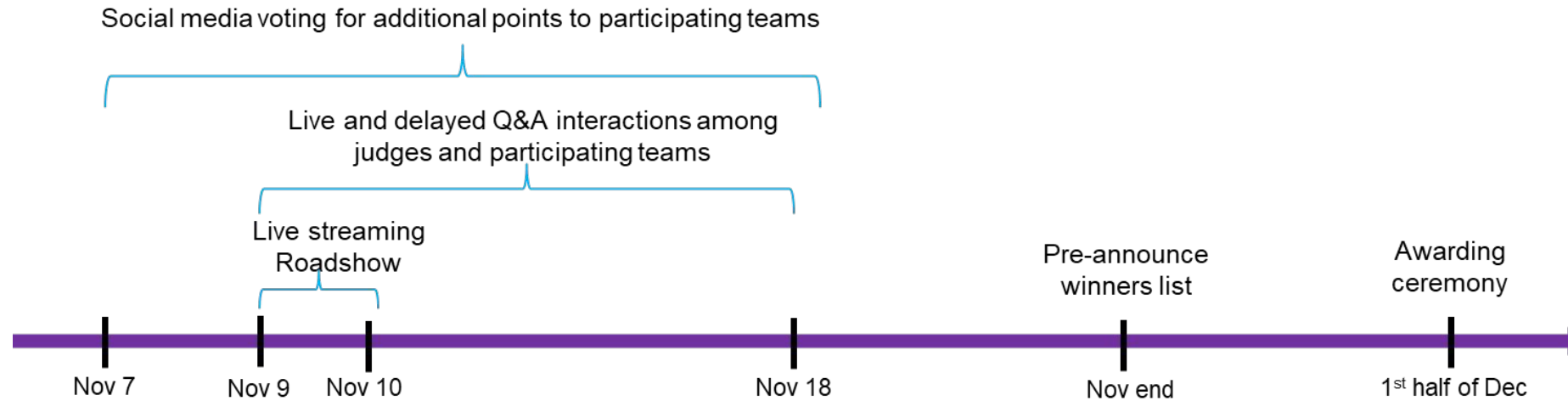
### **Security Project Board Status**

- 1 New Issues (-1)
- 0 Release Backlog (-1)
- 4 In Progress/QA (-1)
- 2 In review (0)
- 48 Done (+3)



# EdgeX China Update

## ●Timeline of EdgeX Challenge China 2022



- EdgeX invited to join COScon (China Open Source conference) 2022 on Oct 29<sup>th</sup>.

EdgeX China community channels:

- Website: <https://cn.edgexfoundry.org/>
- OSChina: <https://www.oschina.net/group/edgex-foundry>
- CSDN: <https://blog.csdn.net/edgexfoundry>
- Zhihu: <https://www.zhihu.com/people/edgex-foundry>
- Bilibili: <https://space.bilibili.com/550595847>

# EdgeX China Challenge Accepted Use Cases

## Health, Education and Consumer

h01	Animal behavior recognition in animal farm to analyze health information, through processing data collected from IPC, temperature sensors, infra imaging, noise detectors
h03	Patient recovery self-practicing & training
h06	5G SASE based capsule bank all-in-one station
h08	CV based medical aesthetics customer evaluation
h09	CV based eye disease screening and evaluation
h10	Interactive mobile robot for retail stores
h12	Facial recognition based smart campus management system (IPCam, access control, borrowing & returning books in Libraries, ...)
h13	CV based customer analytics in shopping mall
h15	Pest and disease identification and management in agriculture
h16	Indoor light & energy management for hospital and schools
h20	CV based heatmap analysis in Museum
h21	Photos taking and sharing system
h22	Smart kitchen management system
h23	CV based smart classroom management
h24	Smart ambulance
h27	Integrated device connector
h29	Video surveillance and security management in gasoline retail station (connecting IPCam, IP speaker)

## Energy and Industrial

e04	Smart lighting
e07	Smart management system for oil & gas production
e09	Industrial product appearance inspection
e10	Energy management in smart cities
e12	Bridge & waterway monitoring
e13	5G MEC+AI based power equipment patrol inspection
e14	Video analytics on the edge
e15	EdgeX-based digital edge management system for production sites
e18	Smart energy management platform
e19	Smart energy management in office building
e20	Power Plant & mine Inspection
e26	Data-driven energy optimization services for building central air conditioning systems
e27	Campus fire warning
e30	Access & security management of office building
e31	Fire monitoring & alarm system
e32	Non-secure mode API gateway
e33	Timber storage management
e34	Smart city camera monitoring
e35	5G general edge platform
e36	Vibration monitoring platform

# Outreach WG (11/8/22)

## Ready/Certification

- No updates

## Events

- Intel organizing a Student Hackathon for early 2023
- Desire to have Edge F2F next spring (nice if it could be collocated with other LF event)
- COVID policy not impacting travel, but budget restraints are

## WebSite Changes (order or priority)

- SEO work complete - a few minor items being taken care of by IOTech. No further reporting on this from here on out
- Issue with docs search being addressed by LF

Next meeting Dec 19

# UCR & ADR Review (as of 11/8/22)

<b>UCR/ADR Name</b>	<b>Status</b>	<b>Owner</b>	<b>Work Group</b>
Core Data Cache	New UCR for review: <a href="https://github.com/edgexfoundry/edgex-docs/pull/884">https://github.com/edgexfoundry/edgex-docs/pull/884</a> Updated based on a couple of minor comments. Ready for final review/approval.	Jim White	Core
Global Common Configuration	Initial UCR for review: <a href="https://github.com/edgexfoundry/edgex-docs/pull/892">https://github.com/edgexfoundry/edgex-docs/pull/892</a> A couple of commenters. Needs a few more.	Lenny	Core
URI reference (profiles, config, etc.)	EdgeX 3.0 item (may be sub part of global config)	Lenny	Core
Microservice authentication	UCR and ADR for review: <a href="https://github.com/edgexfoundry/edgex-docs/pull/659">https://github.com/edgexfoundry/edgex-docs/pull/659</a>	Bryon	Security

# Document work (as of 11/8/22)

## Docs that should be done

#843 M [SE indexing old docs]

#855 - L [extend Go SDK API docs]

#859 - L [version warning popup]

~~#860 - L [update UI security docs]~~

## Recommend push to Minnesota (or between Levski & Minn)

#899/900 - L [why EdgeX security requirements are met]

#732 L [role based access for Mosquitto]

#714 L [images to LFS]

#642 L [export to cloud]

#667 L [how to build containers]

#489 M (with #121, #21) [consume/send binary]

# Miscellaneous

- Jim White now elected as LF Technical Advisory Council (TAC) representative for EdgeX
- Levski Release Material
  - <https://wiki.edgexfoundry.org/display/FA/Levski>
  - <https://www.edgexfoundry.org/software/releases/>
  - Blog soon to go live on LF / EdgeX sites
- [Minnesota Planning Meeting](#) Schedule:
  - **Mon Nov 14th** 7am - 10am PT Business Topics and Architecture Tee up
  - **Tues Nov 15th** 9am - 12pm PT Cadence & Process Check, Architecture Topics
  - **Wed Nov 16th** 7am - 10am PT Minnesota Scoping Part 1
  - **Thurs Nov 17th** 9am - 12pm PT Minnesota Scoping Part 2 and Levski lessons learned
  - Will cancel all other EdgeX Calls that week
  - Registration page now live: <https://bit.ly/MinnesotaPlanning>



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Thank You